

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-022655**Date Inspected:** 13-Apr-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** An Qing Xiang**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Umesh Gaikwad was present during the times noted above for observations relative to the fabrication of the Self-Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

This Quality Assurance (QA) Inspector observed the following work in progress:

Bay 14

OBG Seg 14W:

The Shielded Metal Arc Welding (SMAW) process on weld joint no: SEG3020BB-038 [Vertical Shear Plate (VSP) SA3447A to Top Anchorage Plate (AP) 3015A, complete joint penetration (CJP) weld at panel point (PP) 125 to PP126]. The welders are identified as 037932 and 066261 and were observed welding in 4G position. ZPMC Quality Control (QC) was identified as Zhu Lin. The welding variables recorded by this QC appeared to comply with welding procedure specification (WPS): B-P-2214-Tc-U4b-FCM-1.

The SMAW process on weld joint no: SEG3020U-591 [Anchor Plate (AP) 3032A to AP3014A and AP3015A, CJP weld at PP126]. The welders are identified as 066179 and 066361 and were observed welding in 4G position. ZPMC QC was identified as Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-Tc-U4b-FCM-1.

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The SMAW process on weld joint nos: SEG3020X-004 and 005 [Longitudinal Diaphragm (LD) 3049A to Top AP3016A, CJP weld at PP125 to PP125.5 and PP125.5 and PP126 (for the respective welds)]. The welders are identified as 066002 and 069841 and were observed welding in 4G position. ZPMC QC was identified as Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-Tc-U4b-FCM-1.

The SMAW process on weld joint no: SEG3020C-029 [Block out Bottom Plate sub-assembly (SA) 3416C to FB3348A, CJP weld at PP128.7]. The welders are identified as 045246 and 067942 and were observed welding in 4G position. ZPMC QC was identified as Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-Tc-U4b-FCM-1.

The SMAW process on weld joint no: SEG3020M-009 [Deck Panel (DP) diaphragm X4817D of DP3174A to FB3328A, CJP weld at PP127]. The welder is identified as 067520 and was observed welding in 2G position. ZPMC QC was identified as Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-P-2212-Tc-U4b-FCM-1.

The Flux Cored Arc Welding (FCAW) process on weld joint no: SEG3020R-002 (DP diaphragm X4816A of DP3174A to Top AP3019A, CJP weld at PP128). The welders are identified as 048433 and 203871 and were observed welding in 2G position. ZPMC QC was identified as Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-T-2232-ESAB.

The FCAW process on weld joint no: SEG3020G-001 (DP diaphragm X4857A of DP3173A to DP diaphragm X4856A of DP3174A, CJP weld at PP128). The welder is identified as 201583 and was observed welding in 3G position. ZPMC QC was identified as Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-T-2233-ESAB.

The FCAW process on weld joint no: SEG3020J-001 (DP diaphragm X4857A of DP3173A to DP diaphragm X4856H of DP3174A, CJP weld at PP126). The welder is identified as 045143 and was observed welding in 3G position. ZPMC QC was identified as Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-T-2233-ESAB.

The FCAW process on weld joint no: SEG3020Q-056 (DP diaphragm X4816B of DP3173A to Top AP3018A, CJP weld at PP126). The welder is identified as 203871 and was observed welding in 2G position. ZPMC QC was identified as Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-T-2232-ESAB.

During random in process visual inspection this QA Inspector observed that ZPMC NDT personnel Mr. Tang Xing Shan was performing Ultrasonic Testing (UT) on the weld joints of segment 14W and found several numbers of non conforming UT indications. These indications are marked on the weld joints by ZPMC NDT personnel. The weld designations are identified as follows.

SEG3020BB-002; ZPMC found 02 no's of UT rejectable indications.

SEG3020BB-011; ZPMC found 06 no's of UT rejectable indications.

SEG3020\*-001; ZPMC found 08 no's of UT rejectable indications.

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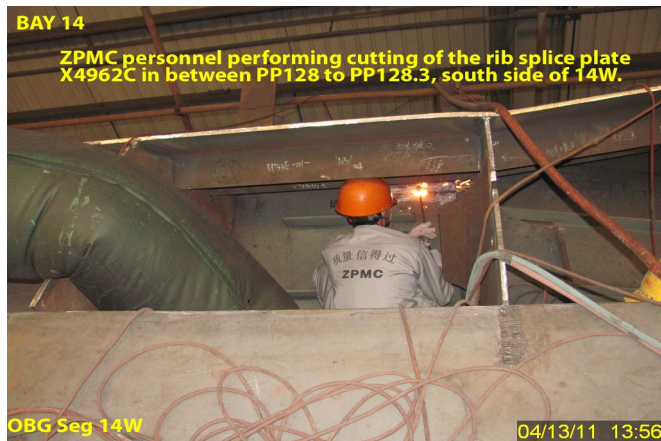
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During random in process visual inspection this QA Inspector observed that ZPMC personnel were cutting the rib splice plate X4962C at south side and X5001C at north side of segment 14W. These plates were conflict between the weld joints of side panel to edge panel at PP128 to PP128.3. This cutting has been done with prior approval of engineer. Attached photograph provide additional details.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



### Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang : 15000422372, who represents the Office of Structural Materials for your project.

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**Inspected By:** Gaikwad,Umesh

Quality Assurance Inspector

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**Reviewed By:** Peterson, Art

QA Reviewer